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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/809,858 | 03/26/2004 | Wilfried Mackel | 677/41958 | 7598 |

7590 11/01/2005

Barnes & Thornburg
Suite 700
750 17th Street, N.W.
Washington, DC 20006-4607

| EXAMINER | |
|---|---|
| COOLEY, CHARLES E | |
| **ART UNIT** | **PAPER NUMBER** |
| 1723 | |

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/809,858 | MACKEL ET AL. | |
| | Examiner | Art Unit | |
| | Charles E. Cooley | 1723 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-8,10-14 and 16* is/are rejected.

7)☒ Claim(s) *4,9 and 15* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 March 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *09022004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

# NON-FINAL OFFICE ACTION

1. This application has been assigned to Technology Center 1700, Art Unit 1723 and the following will apply for this application:

Please direct all written correspondence with the correct application serial number for this application to Art Unit 1723.

Telephone inquiries regarding this application should be directed to the Electronic Business Center (EBC) at http://www.uspto.gov/ebc/index.html or 1-866-217-9197 or to the Examiner at (571) 272-1139. All official facsimiles should be transmitted to the centralized fax receiving number 571-273-8300.

### *Priority*

2. Receipt is acknowledged of papers submitted under 35 U.S.C. § 119, which papers have been placed of record in the file.

### *Information Disclosure Statement*

3. Note the attached PTO-1449 form submitted with the Information Disclosure Statement filed 2 SEP 2004.

### *Drawings*

4. The drawings are objected to because of the following informalities:

a. the drawing figures do not comply with 37 CFR 1.84 due to poor line quality. Only informal marked-up drawing sheets are present in the file.

Correction is required.

5. Applicant should verify that (1) all reference characters in the drawings are described in the detailed description portion of the specification and (2) all reference characters mentioned in the specification are included in the appropriate drawing Figure(s) as required by 37 CFR 1.84(p)(5).

## INFORMATION ON HOW TO EFFECT DRAWING CHANGES

### Replacement Drawing Sheets

Drawing changes must be made by presenting replacement figures which incorporate the desired changes and which comply with 37 CFR 1.84. An explanation of the changes made must be presented either in the drawing amendments, or remarks, section of the amendment. Any replacement drawing sheet must be identified in the top margin as "Replacement Sheet" (37 CFR 1.121(d)) and include all of the figures appearing on the immediate prior version of the sheet, even though only one figure may be amended. The figure or figure number of the amended drawing(s) must not be labeled as "amended." If the changes to the drawing figure(s) are not accepted by the examiner, applicant will be notified of any required corrective action in the next Office action. No further drawing submission will be required, unless applicant is notified.

Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin.

### Annotated Drawing Sheets

A marked-up copy of any amended drawing figure, including annotations indicating the changes made, may be submitted or required by the examiner. The annotated drawing sheets must be clearly labeled as "Annotated Marked-up Drawings" and accompany the replacement sheets.

### Timing of Corrections

Applicant is required to submit acceptable corrected drawings within the time period set in the Office action. See 37 CFR 1.85(a). Failure to take corrective action within the set period will result in ABANDONMENT of the application.

If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings MUST be filed within the THREE MONTH shortened statutory period set for reply in the "Notice of Allowability." Extensions of time may NOT be obtained under the provisions of 37 CFR 1.136 for filing the corrected drawings after the mailing of a Notice of Allowability.

### *Specification*

6. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

7. The disclosure is objected to because of the following informalities:

a. the specification was not amended properly in accordance with 37 CFR 1.121. Corrections to the specification must be made on a paragraph by paragraph or section by section basis. Unamended paragraphs, unless in a substitute specification, should not appear.

Appropriate correction is required.

8. The substitute Abstract of the Disclosure is acceptable.

9. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed (MPEP 606.01).

### *Claim Rejections - 35 U.S.C. § 112, second paragraph*

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 7-9 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7: "the neck bearing ring" lacks antecedent basis - note claims 2-3.

Claim 7: "the neck bearing ring" lacks antecedent basis- note claims 2-3.

12. Each pending claim should be thoroughly reviewed such that these and any other informalities are corrected so the claims may particularly point out and distinctly claim the subject matter which applicant regards as the invention, as required by 35 U.S.C. § 112, second paragraph.

***Claim Rejections - 35 USC § 102***

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

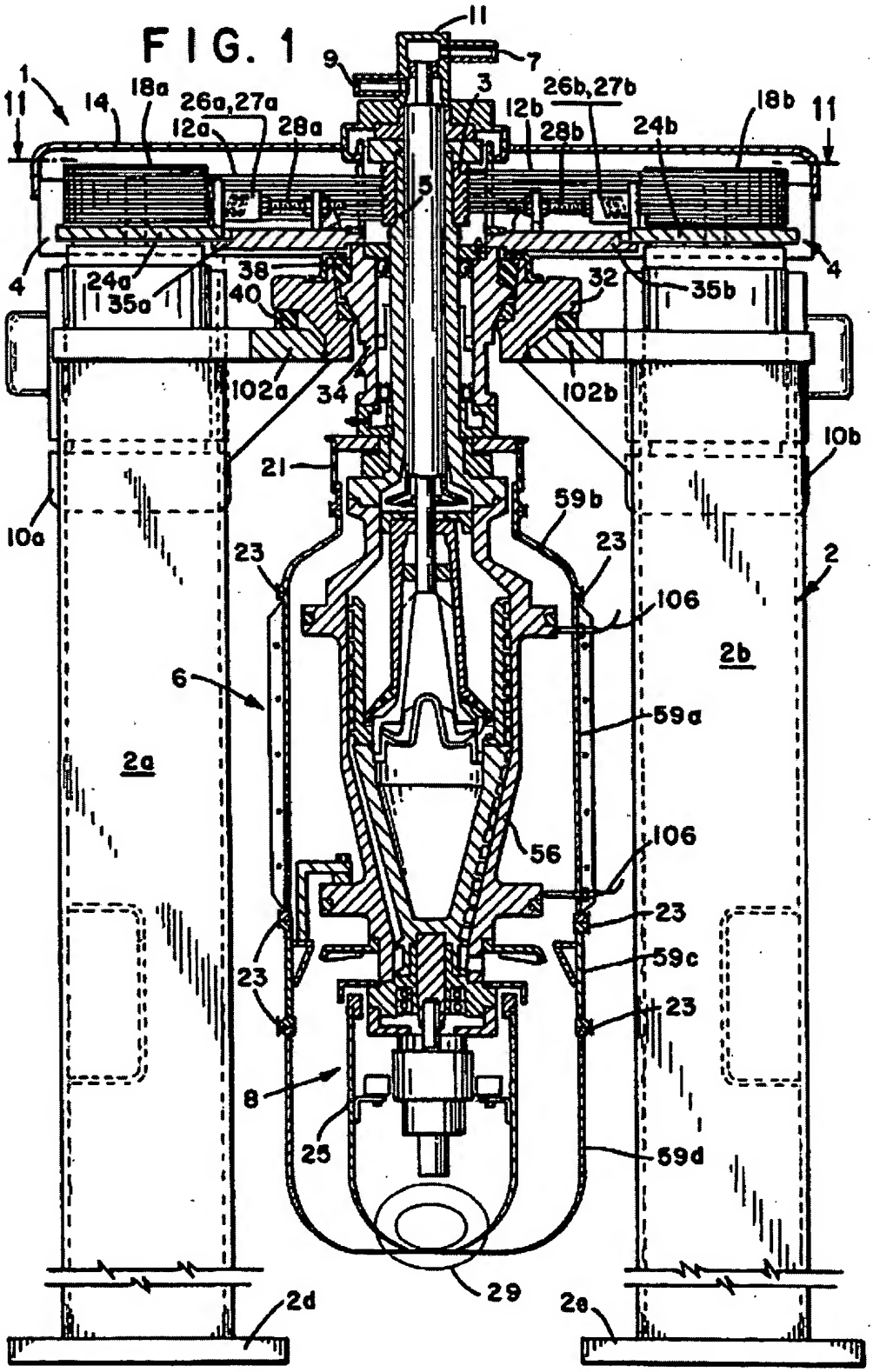
> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**14. Claims 1-3, 5-8, 10-14, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Franzen et al. (US 5,364,335).**

The patent to Franzen et al. (US 5,364,335) discloses, as seen in the Figures below, a driving system for a separator having a centrifugal drum 56 with a vertical axis of rotation, comprising: a vertically aligned driving spindle 5 configured to accommodate a centrifugal drum 56; the driving spindle being arranged by a neck bearing 33 and a footstep bearing 55 in an opening of a drive housing 32; the neck bearing being 33 supported in an axially rigid and radially resilient manner (via rubber member 38) on the machine housing; and the neck bearing 33 being constructed as an angular ball bearing and supporting the centrifugal drum on a spherical-shaped supporting surface 37 of the machine housing; the neck bearing 33 is supported on an inside in an upward direction on the driving spindle 5 and in a downward direction toward an outside on an outer neck bearing ring 34; the neck bearing 33 includes a neck bearing ring 34 having a ball and socket-type construction on its underside resting on the complementarily spherical-shaped supporting surface 37; the spherical shaped supporting surface 37 is utilized for a weight-dependent frictional damping of the driving system; a gap (in which elements 36 and 38 are disposed) is located between an outer circumference of the neck bearing ring 34 and an inner circumference of the drive housing 32; a sealing and spring ring 38 bridges the gap; the footstep bearing 55 is radially fixed in the drive housing and is axially disposed as a movable bearing; a supporting surface of the neck bearing ring 34 on the drive housing is connected with a lubricating system 42, 49, 53 for lubricating the neck bearing and the footstep bearing; the neck bearing and the footstep bearing are

connected by a duct 42 around the driving spindle 5, so that the two bearings can be jointly lubricated; a first lubricating bore (below 45) for a lubricant, leads into an area around the driving spindle above the neck bearing; a second lubricating bore 49 is provided for guiding lubricant to the footstep bearing; wherein the lubricant is oil (col. 3, lines 46-59).

FIG. 1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59b
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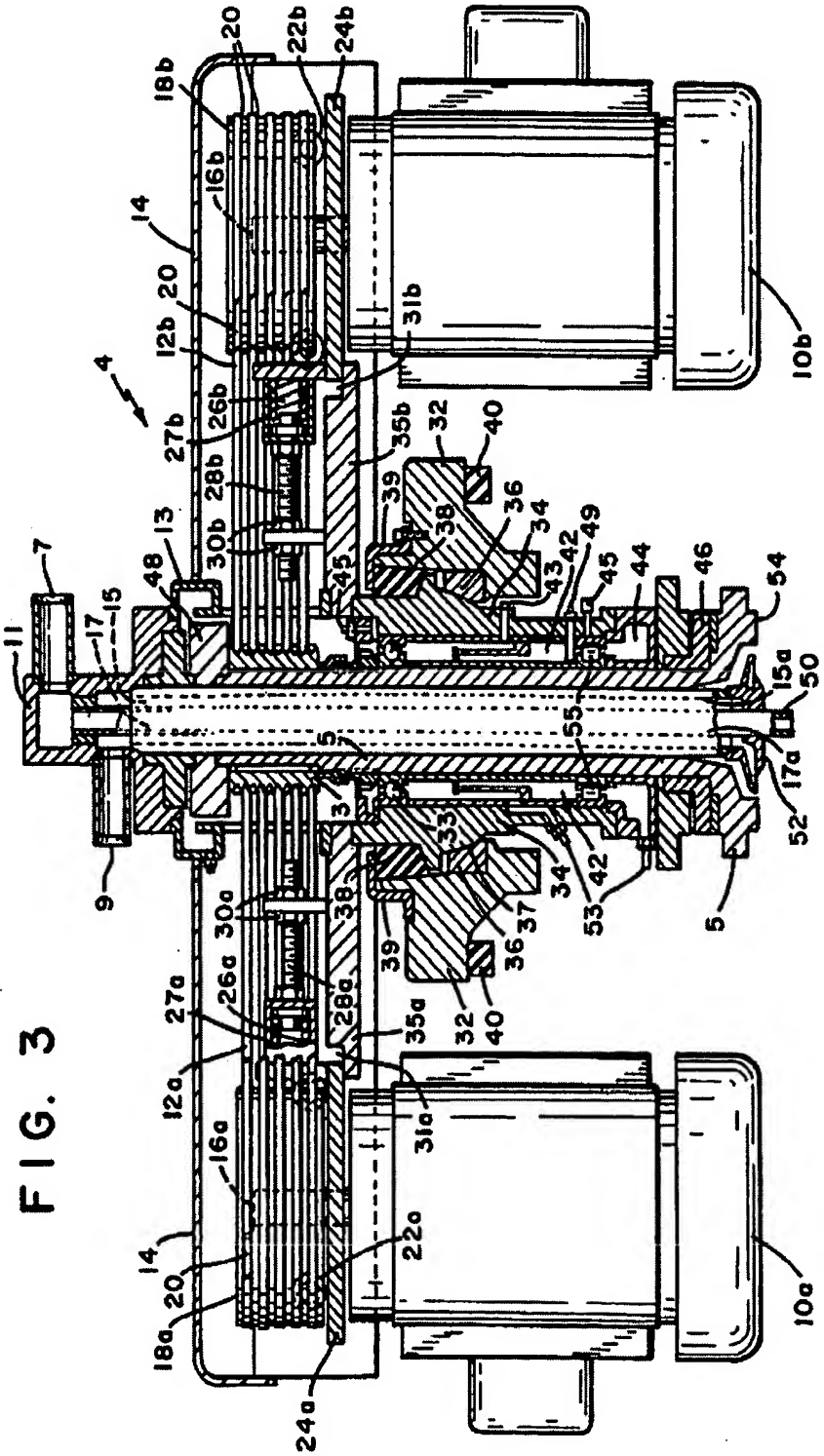
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FIG. 3

**15. Claims 1-3, 5-8, 10-14, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Williams (US 2,040,351).**

The patent to Williams '351 discloses, as seen in the Figure below, a driving system for a separator having a centrifugal drum A with a vertical axis of rotation, comprising: a vertically aligned driving spindle 12 configured to accommodate a centrifugal drum A; the driving spindle being arranged by a neck bearing (the uppermost bearing 7) and a footstep bearing (9 or the lowermost bearing 7) in an opening of a drive housing 1; the neck bearing being supported in an axially rigid and radially resilient manner (via yielding member 10) on the machine housing; and the neck bearing being constructed as an angular ball bearing and supporting the centrifugal drum on a spherical-shaped supporting surface 3 of the machine housing; the neck bearing is supported on an inside in an upward direction on the driving spindle 12 and in a downward direction toward an outside on an outer neck bearing ring 6; the neck bearing includes a neck bearing ring 6 having a ball and socket-type construction on its underside resting on the complementarily spherical-shaped supporting surface 3; the spherical shaped supporting surface 3 is utilized for a weight-dependent frictional damping of the driving system; a gap (in which element 10 is disposed) is located between an outer circumference of the neck bearing ring 6 and an inner circumference of the drive housing; a sealing and spring ring 10 bridges the gap; the footstep bearing is radially fixed in the drive housing and is axially disposed as a movable bearing; a supporting surface of the neck bearing ring 6 on the drive housing is connected with a lubricating system 5b, 13, 14 for lubricating the neck bearing and the footstep bearing;

the neck bearing and the footstep bearing are connected by a duct 5b around the driving spindle 12 so that the two bearings can be jointly lubricated; a first lubricating bore (below 11) for a lubricant, leads into an area around the driving spindle above the neck bearing; a second lubricating bore (below 5a) is provided for guiding lubricant to the footstep bearing; wherein the lubricant is oil (col. 2, lines 42-49).

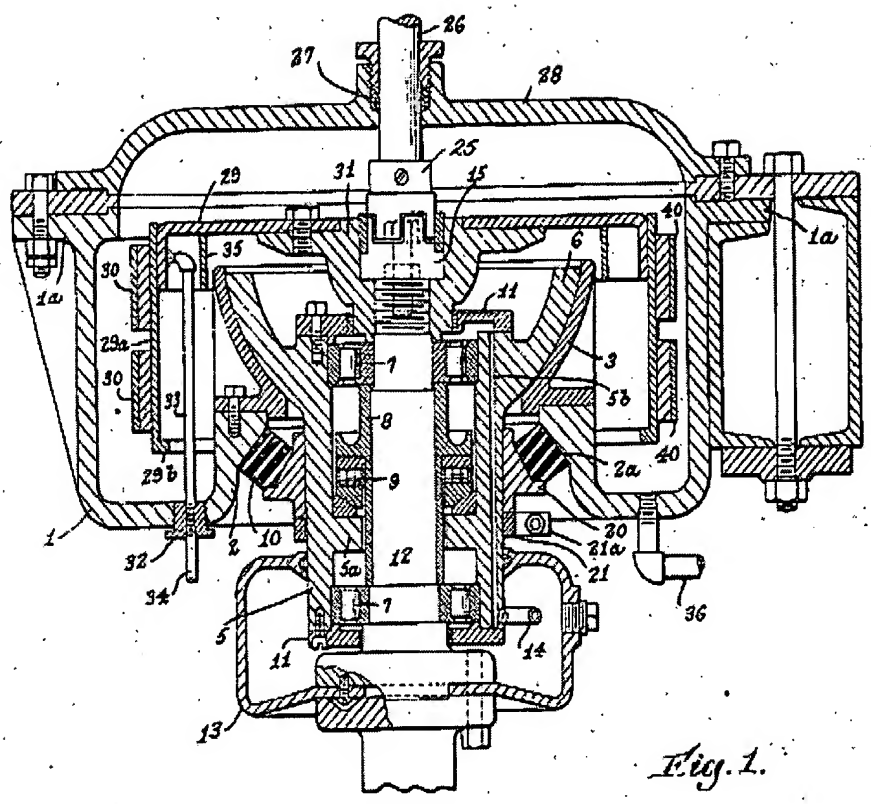
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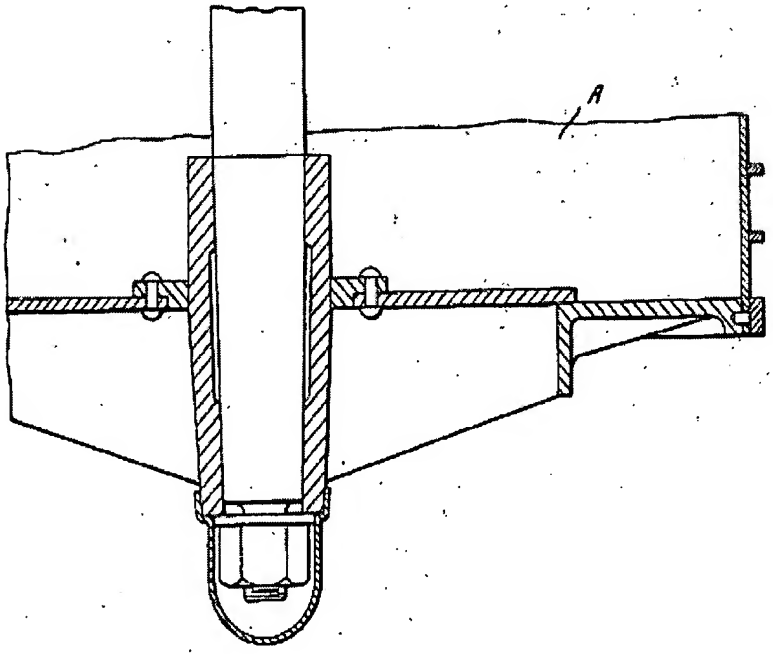
Fig. 1.


A

**16. Claims 1-3, 5-7, 10, and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Carr (US 6,776,752 B2).**

The patent to Carr '752 discloses, as seen in Figure 16 below, a driving system for a separator having a centrifugal drum 10 with a vertical axis of rotation, comprising: a vertically aligned driving spindle 14 configured to accommodate a centrifugal drum 10; the driving spindle being arranged by a neck bearing (below 104) and a footstep bearing (above 102) in an opening of a drive housing 21; the neck bearing being supported in an axially rigid and radially resilient manner (via yielding member 110) on the machine housing; and the neck bearing being constructed as an angular ball bearing and supporting the centrifugal drum on a spherical-shaped supporting surface 106 of the machine housing; the neck bearing is supported on an inside in an upward direction on the driving spindle 14 and in a downward direction toward an outside on an outer neck bearing ring 96; the neck bearing includes a neck bearing ring 96 having a ball and socket-type construction on its underside resting on the complementarily spherical-shaped supporting surface 106; the spherical shaped supporting surface 106 is utilized for a weight-dependent frictional damping of the driving system; a gap 105 is located between an outer circumference of the neck bearing ring 96 and an inner circumference of the drive housing; the footstep bearing is radially fixed in the drive housing and is axially disposed as a movable bearing; the neck bearing and the footstep bearing are connected by a duct (within 100) around the driving spindle, which is capable of holding lubricant so that the two bearings can be jointly lubricated.

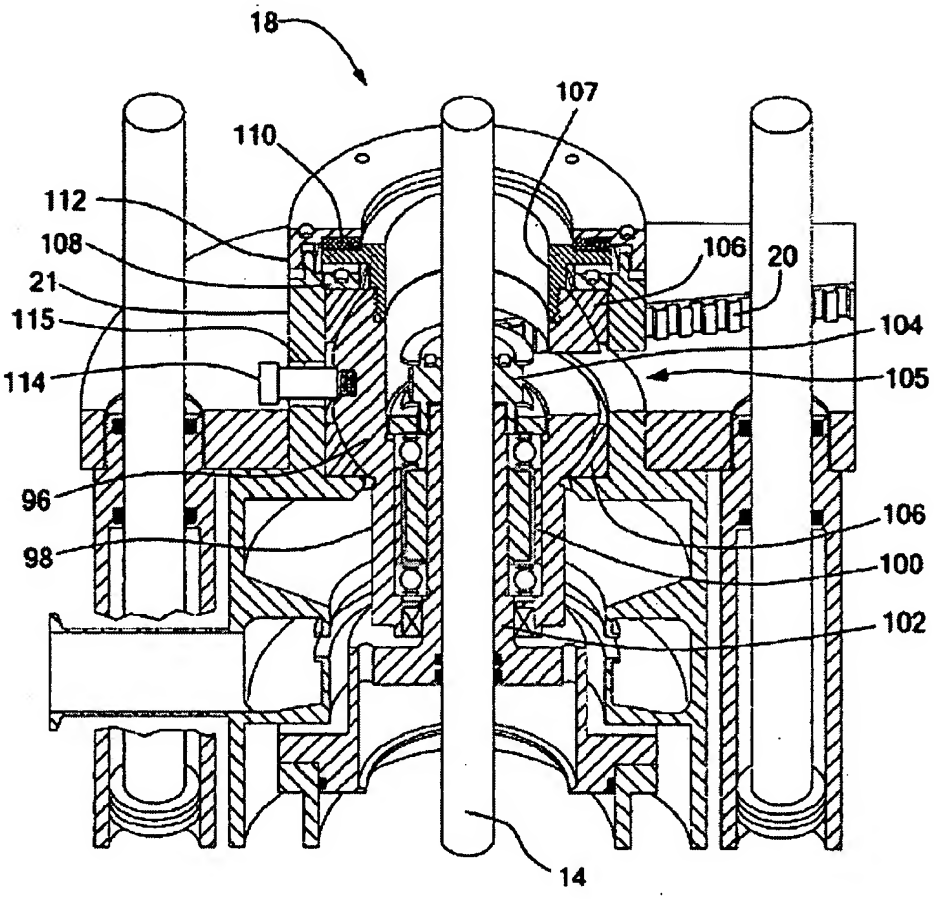



*FIG. 16*

***Allowable Subject Matter***

17. Claim 9 would be allowable if rewritten to overcome the rejection under 35 U.S.C. § 112 and to include all of the limitations of the base claim and any intervening claims.

18. Claims 4 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

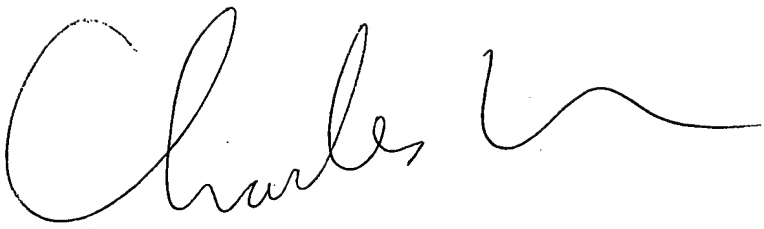
***Conclusion***

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The cited prior art discloses driving systems for separators.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E. Cooley whose telephone number is (571) 272-1139. The examiner can normally be reached on Mon-Fri. All official facsimiles should be transmitted to the centralized fax receiving number 571-273-8300.

21. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Charles E. Cooley
Primary Examiner
Art Unit 1723

27 October 2005